Abstract:
This paper presents an approach to automatically detect the position of the Wi-Fi access points. It uses Wi-Fi received signal strength as well as some characteristics of the buildings such as the height of the building and the movement direction of the user to detect the position of the access points. This approach comprised of two phases: in phase one, a dynamic threshold is computed for each detected access point using the highest received signal strength. Then the threshold is used to detect a small area surrounding the access point. In phase two, it detects the position of the access point by monitoring the angle between the user and the access point, if the angle is in a certain range, then the position of the access point is detected. The experiments results show a high accuracy achieved by the proposed approach. Moreover, the results show that the proposed approach is promising.